

ABSTRACT OF THE DISCLOSURE

A method and computer-implemented system for optimizing a product. Based on the "voice of the customer", aspects of the product that are critical to the customer satisfaction, and target values, therefore, are identified. Aspects are characterized in terms of their contributing factors. Each contributing factor is characterized in a transfer function in terms of control and noise factors impacting the contributing factors. Contributing factors are optimized during product design by shifting nominal design values for control factors with respect to the transfer function such that target contributing factors are attained with minimum variability due to existing noises and variability in control. Where target values cannot be obtained through design optimization, conventional methods of manufacturing optimization are implemented. The extent to which the target values are attained and maintained over the life of the product are assessed.